



*Setting the Standard in Mobile Power*

**Instruction Manual for Model**  
**HYDRO – 13-KVA-C-S-P-15-3-W/CB**

**3 Phase**  
**Hydraulic Generator**

*Manufacturing of: Vehicle Mounted Generators • Hydraulic Generators*

*P.O. Box 582 • Chester, NY 10918 • 845-469-9151 • Fax: 845-469-7871 • Web Site/E-mail: [Www.fabcopower.com](http://www.fabcopower.com)*

## **Initial Installation and Start-Up**

**Be sure you set the hydraulic flow (GPM) to the generator at  
Approximately 62.5 HZ or 3750 RPM with NO electrical load  
on the generator.**

**By using this setting you will have approximately 60HZ (cycles) or  
3600 RPM when you are running at full rated load.**

**One way this can be accomplished is by using a Photo Tachometer  
on our generator coupling or generator cooling fan.**

*A Photo Tachometer is an inexpensive tool that can be purchased at  
McMasters, Grainger, Sears or any other electrical supplier.*

**ADVANTAGES OF USING A FABCO POWER TRI-PHASE GENERATOR**

- 1) MOTORS AND WIRES ARE SMALLER THAN SINGLE PHASE INSTALLATIONS FOR THE SAME HORSE POWER RATINGS.
- 2) MOTOR REVERSING ON BOOM AND LADDER TRUCKS WITHOUT USING MULTIPLE HYDRAULIC LINES, LESS MAINTENANCE AND BREAK DOWNS USING ELECTRIC MOTORS AND FLEXIBLE CABLES.
- 3) MATERIALS AND INSTALLATION COSTS ARE MUCH LESS THAN FULLY HYDRAULICALLY ACTUATED SYSTEMS.

**SPECIFICATIONS FOR THREE PHASE GENERATORS**

<b><u>KW</u></b>	<b><u>AMPS L1, L2, L3</u></b>	<b><u>VOLTS L1, L2, L3</u></b>	<b><u>L1, L2, L3 -TO- NEUTRAL</u></b>
<b>10.5 KW</b>	<b>36 AMPS</b>	<b>208 VOLTS</b>	<b>120 VAC L -TO- N</b>

<b>INSULATION CLASS</b>	<b>H</b>
<b>RATED AMB TEMP</b>	<b>40 C</b>
<b>POWER FACTOR</b>	<b>1.0 TO 80%</b>
<b>AC OUTPUT FREQUENCY</b>	<b>60 HZ</b>
<b>GENERATOR RPM</b>	<b>3600</b>
<b>MOTOR</b>	<b>PISTON</b>

**FLOW RATES AND PRESSURES**

**10 KW 15.5 GPM AT 2500 PSI**

**DIMENSIONS 13 KVA L = 23" W = 8 1/4" H = 13 1/4"**

**HYD 13KVA-C-S-P-15-3 W/CB**

## **TECHNICAL INFORMATION AND SPECIFICATIONS**

**GENERATOR AC 60 HZ, SPEED = 3600 RPM**

**GENERATOR VOLTAGE...120/208 THREE PHASE (Y) OR THREE  
PHASE 120 DELTA**

**MOTOR STARTING SURGE = 300% OF CONTINUOUS**

**OUTPUT 10,500-WATTS CONTINUOUS AC  
13 KVA PEAK AC**

**AC AMPS @ 208 VOLT = 30 CONTINUOUS AND 36 PEAK**

### **HYDRAULIC MOTOR SPECIFICATIONS**

**AXIAL PISTON TYPE .....15cc DISPLACEMENT**

**MOTOR SHAFT DIAMETER.....ONE INCH**

**FLOW CONTROL (OPTIONAL)...CARTRIDGE TYPE**

**RATED FLOW = 15.5 GPM. ....MAXIMUM PSI = 2500**

**MOTOR SPEED = 3,600 RPM.....MAXIMUM = 4,200 RPM**

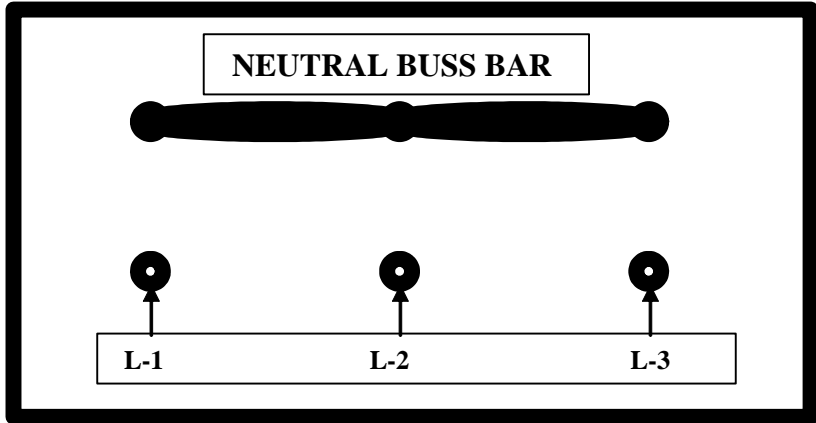
**INLET PORT SIZE = 1 & 1/16 – 12 S.A.E**

**RETURN PORT SIZE = 1 & 1/16 – 12 S.A.E**

**CASE DRAIN PORT SIZE = 1 & 1/16 – 12 S.A.E**

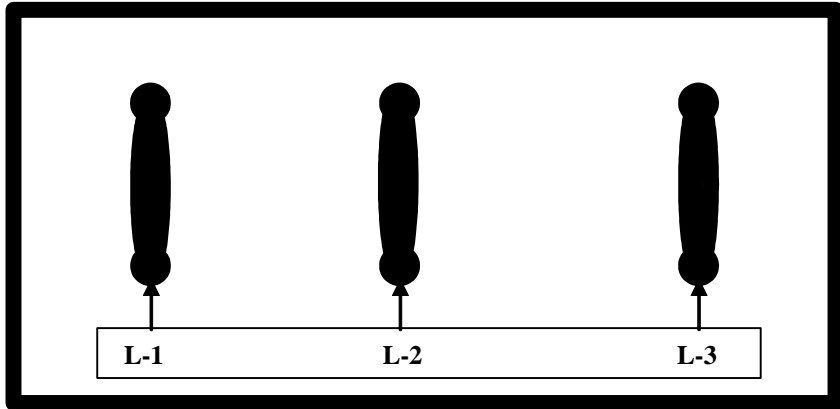
**THREE PHASE (Y) CONNECTED 120/208 60 HZ**

**L-1, L-2 AND L-3 TO NEUTRAL = 120 VOLTS**

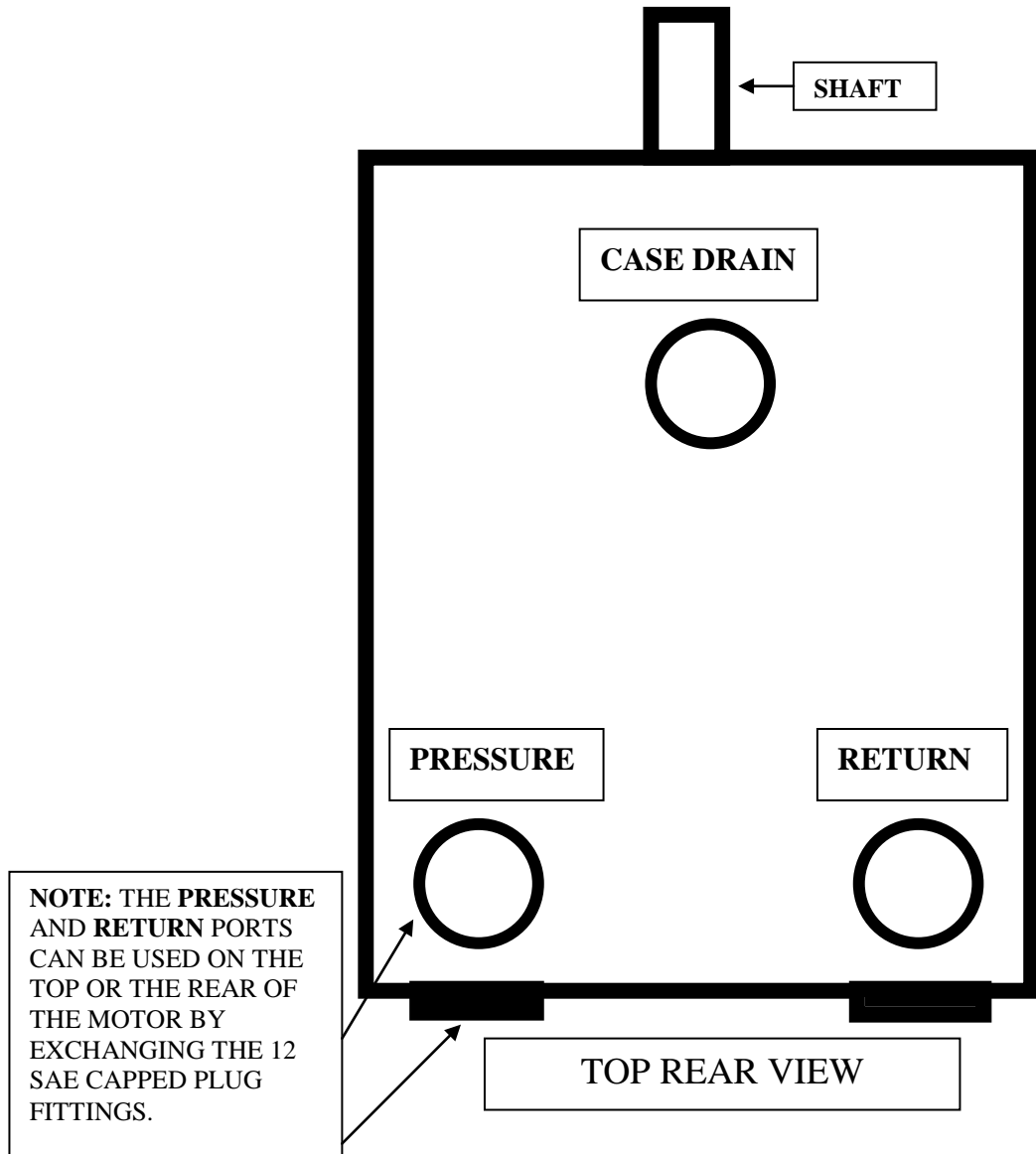


**L-1 TO L-2 = 208 VOLTS L-2-TO L-3 = 208 VOLTS L-3 TO L-1 = 208 VOLTS**

**THREE PHASE DELTA  $\triangle$  120 VOLT 60 HZ**

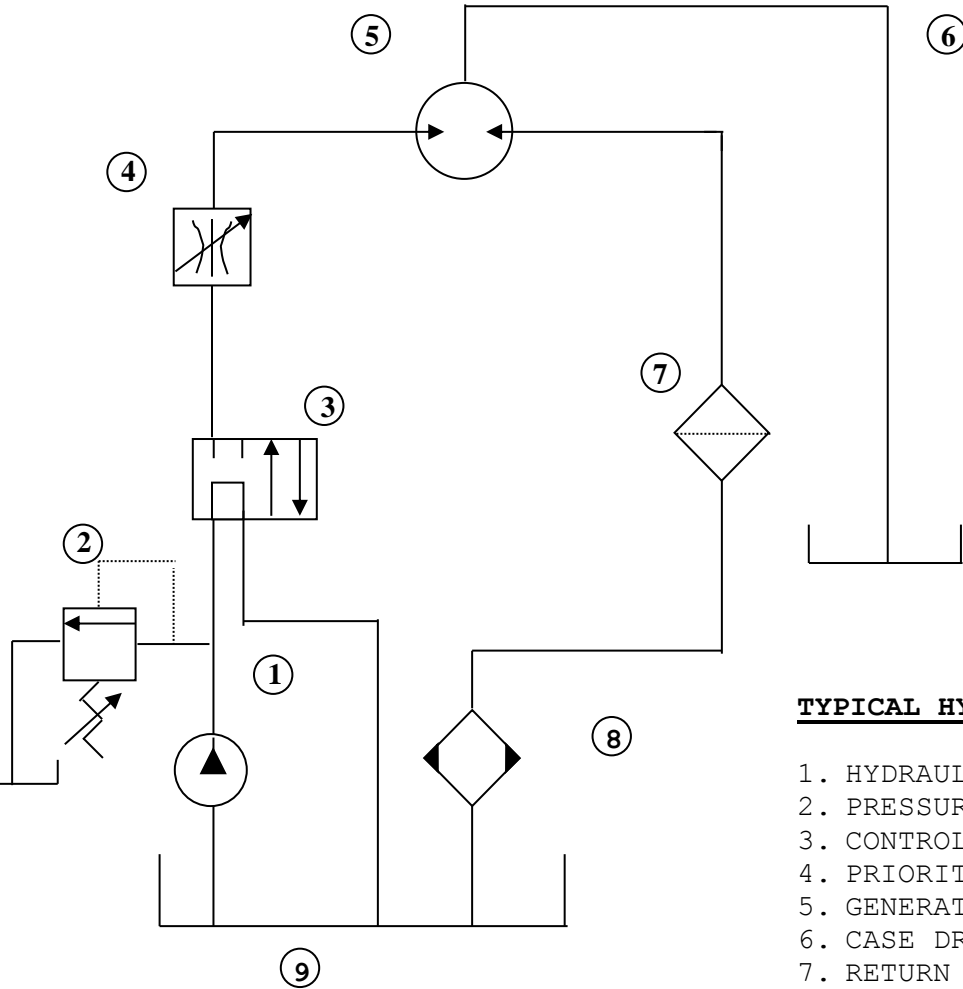


**L-1 TO L-2 = 120 VOLTS L-2 TO L-3 = 120 VOLTS L-3 TO L-1 = 120 VOLTS**



**15 cc PISTON MOTOR ALL FITTINGS ARE # 12 SAE**

# **FIXED DISPLACEMENT TYPE GEAR PUMP**



**TYPICAL HYDRAULIC SCHEMATIC**

1. HYDRAULIC PUMP
2. PRESSURE RELIEF VALVE
3. CONTROL VALVE
4. PRIORITY FLOW CONTROL\*
5. GENERATOR HYRAULIC MOTOR
6. CASE DRAIN LINE\*\*
7. RETURN LINE FILTER
8. OIL COOLER
9. HYDRAULIC FLUID RESERVOIR

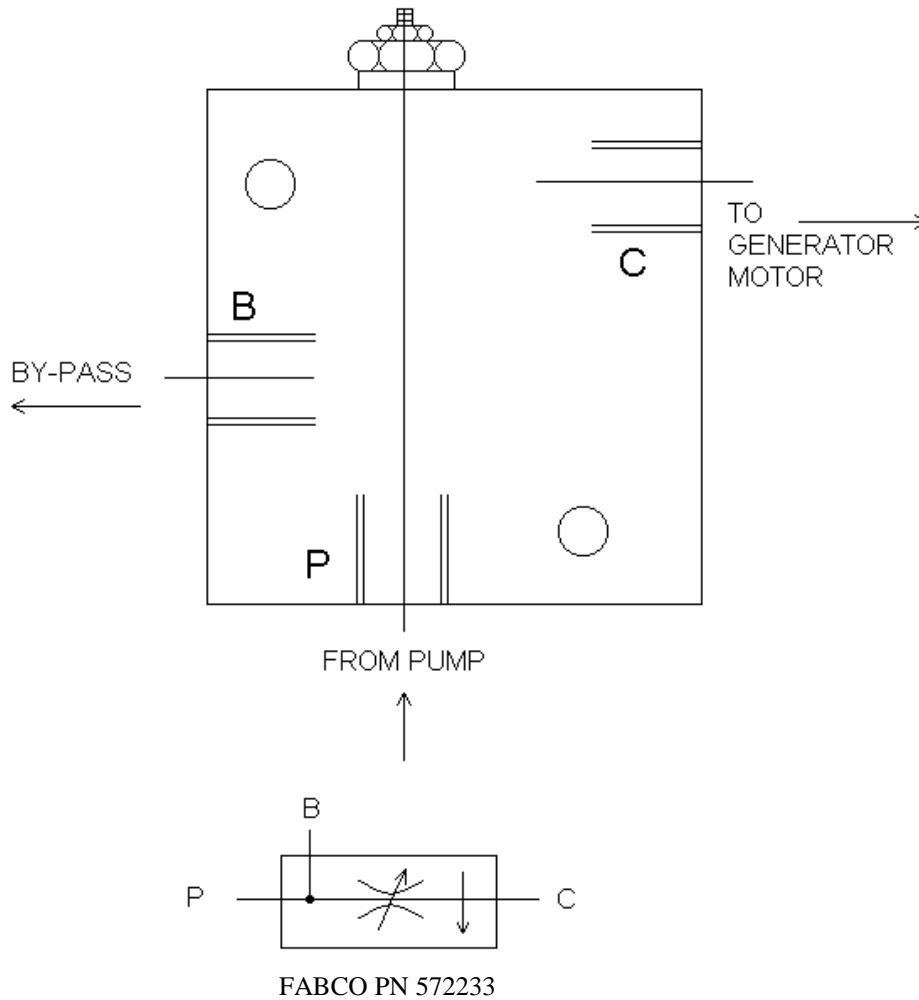
\* Some units may be equipped with integral priority flow control, refer to specific model number.

\*\* External case drain line may be required on some units refer to specific model number.

When external case drain is required it should be unobstructed direct return to reservoir with a minimum I.D. no less than that of case drain port on generator motor.

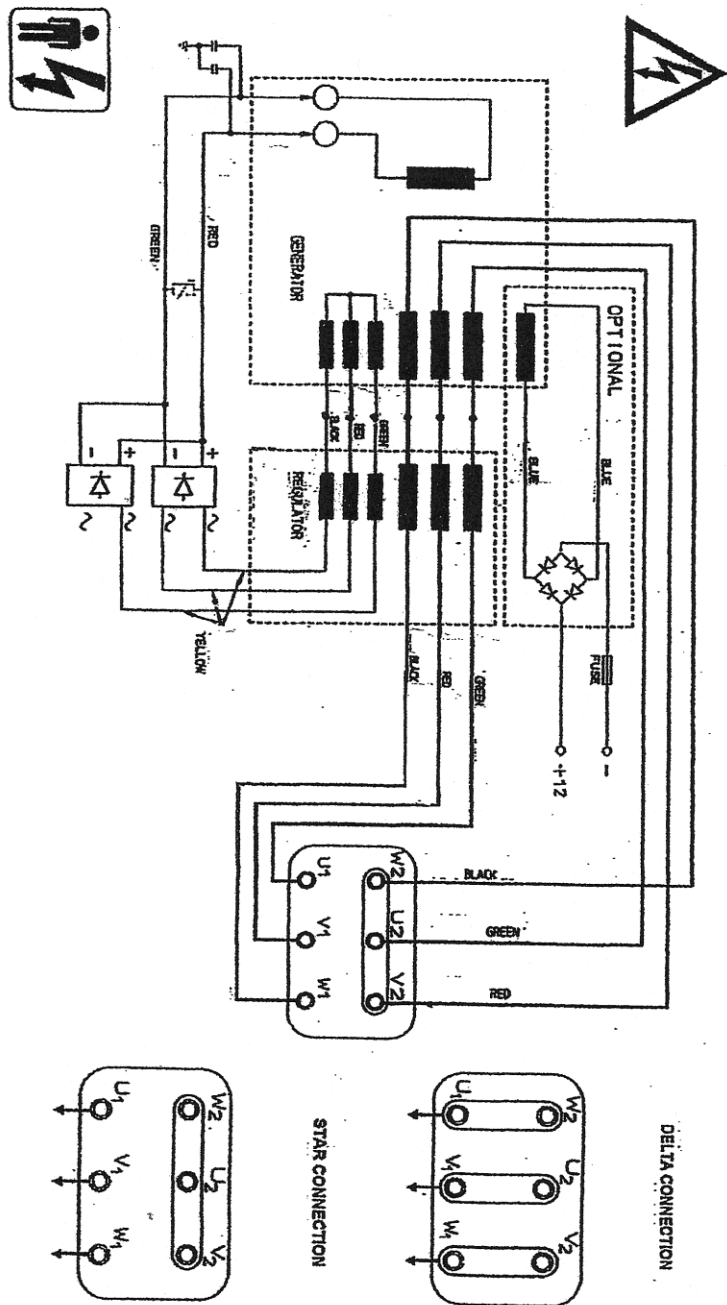
***FOR SPECIFIC INSTALLATION RECOMMENDATIONS CONSULT FACTORY***

# FABCO BY-PASS FLOW CONTROL



**NOTE: THIS ASSEMBLY ONLY NEEDED WITH FIXED DISPLACEMENT TYPE GEAR PUMP.**

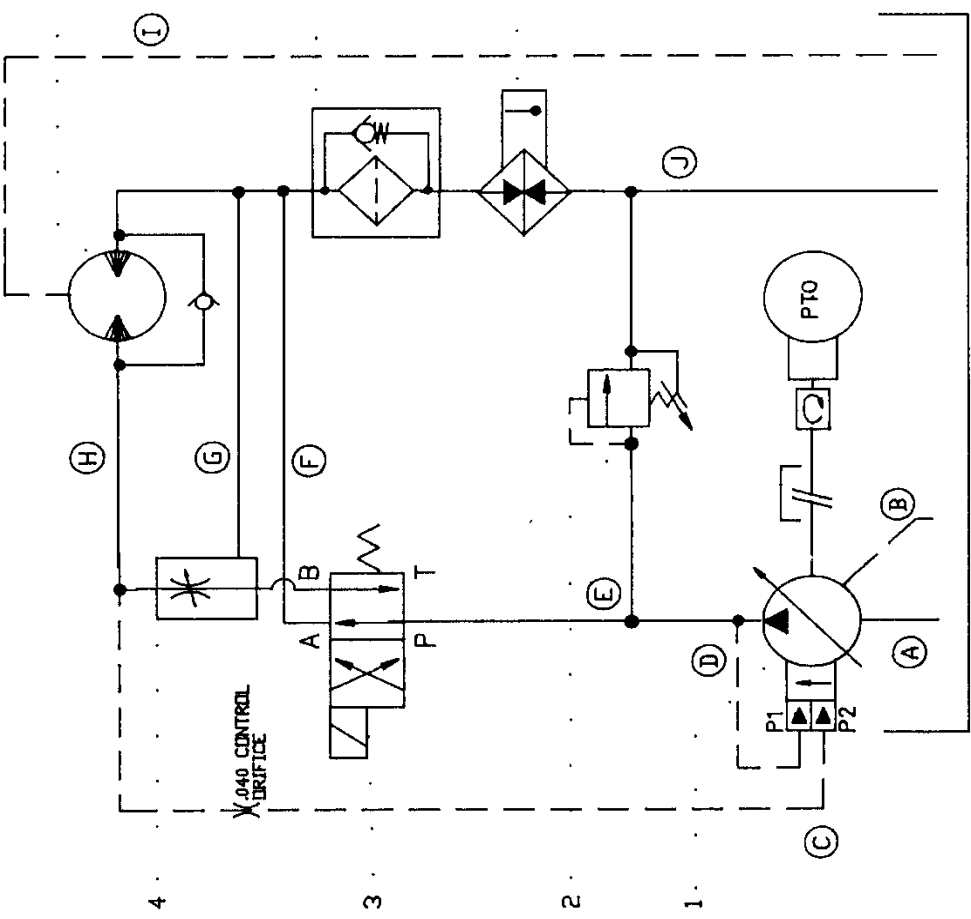




REVISIONS	
DESCRIPTION	DATE
LTR	INITIALS

**TYPICAL HYDRAULIC SCHEMATIC**

**PISTON TYPE, LOAD SENSING**



ITEM QTY	ITEM	DESCRIPTION
1 1	HYDRAULIC PUMP	PISTON TYPE V/LOAD SENSE
2 1	RELIEF VALVE	SET AT 3000 PSI
3 1	DIRECTIONAL VALVE	(SEE NOTE 'A')
4 1	FLOW CONTROL	(SEE NOTE 'A')
5 1	HYDRAULIC MOTOR	WITH EXTERNAL CASE DRAIN
6 1	FILTER	RETURN LINE V/BYPASS
7 1	HEAT EXCHANGER	
8 1	HYDRAULIC RESERVOIR	

CUSTOMER CONNECTIONS & LINE SIZES	
DES	DESCRIPTION
A	1-1/4" SUCTION LINE
B	3/8" PUMP CASE DRAIN
C	1/4" EXTERNAL SENSE LINE
D	N/A INTERNAL SENSE LINE
E	1" MAIN SUPPLY LINE
F	3/4" PRESSURE LINE
G	3/4" PRESSURE LINE
H	3/4" PRESSURE LINE
I	3/8" MOTOR CASE DRAIN
J	1" RETURN LINE

- \* REQUIRED ON SOME MODELS. REFER TO SPECIFIC MODEL NUMBER.
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**NOTE 'A'**  
 SUPPLIED ON SOME MODELS. REFER TO SPECIFIC MODEL NUMBER.

**FOR SPECIFIC INSTALLATION  
 RECOMMENDATIONS CONSULT  
 FACTORY**

**F A B C O P O W E R**

CHESTER, NY

MAX FLOW: \_\_\_\_\_ MAX PRESSURE: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

# TROUBLESHOOTING THREE PHASE GENERATOR

<b>PROBLEMS</b>	<b>CAUSES</b>	<b>REMEDIES</b>
<b>ALTERNATOR EXCITATION FAILURE</b>	<ol style="list-style-type: none"> <li>1. Low Speed</li> <li>2. Faulty winding</li> </ol>	<ol style="list-style-type: none"> <li>1. Check RPM and set at nominal value.</li> <li>2. Check that winding resistance is as shown in the tables.</li> </ol>
<b>HIGH NO-LOAD VOLTAGE</b>	<ol style="list-style-type: none"> <li>1. Speed too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and adjust RPM's</li> </ol>
<b>LOW NO-LOAD VOLTAGE</b>	<ol style="list-style-type: none"> <li>1. Speed too low.</li> <li>2. Faulty rotary diodes.</li> <li>3. Breakdown in windings.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and adjust RPM's</li> <li>2. Check and replace.</li> <li>3. Check winding resistance, as per tables.</li> </ol>
<b>PROPER NO-LOAD BUT LOW LOADED VOLTAGE</b>	<ol style="list-style-type: none"> <li>1. Low loaded speed.</li> <li>2. Load too large.</li> <li>3. Rotary diodes short-circuited</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and regulate RPM.</li> <li>2. Check and change.</li> <li>3. Check and replace.</li> </ol>
<b>UNSTABLE VOLTAGE</b>	<ol style="list-style-type: none"> <li>1. Loose contacts.</li> <li>2. Uneven rotation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check connections.</li> <li>2. Check for uniform rotation speed.</li> </ol>
<b>NOISY GENERATOR</b>	<ol style="list-style-type: none"> <li>1. Broken bearings.</li> <li>2. Poor couplings.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace.</li> <li>2. Check and repair.</li> </ol>



## WARRANTY TERMS

EACH FABCO POWER GENERATOR IS WARRANTED TO THE ORIGINAL OWNER TO BE FREE FROM DEFECTS IN MATERIAL OR WORKMANSHIP UNDER NORMAL USE AND SERVICE FOR ONE (1) YEAR FROM DATE OF PURCHASE.

OUR OBLIGATION UNDER THIS WARRANTY IS LIMITED TO REPLACING OR REPAIRING, AT OUR OPTION, ANY PART OR PARTS PROVED TO BE SO DEFECTIVE WHICH ARE RETURNED **FREIGHT PREPAID.**